



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

**New Balance Athletic Shoe Inc
Oxford County
Norway, Maine
A-814-71-C-R**

**Departmental
Findings of Fact and Order
Air Emission License
Renewal**

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

New Balance Athletic Shoe Inc. (New Balance) has applied to renew their Air Emission License permitting the operation of emission sources associated with their Norway facility.

The equipment addressed in this license is located at 72 Cottage Street, Norway, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

| <u>Equipment</u> | <u>Maximum Capacity (MMBtu/hr)</u> | <u>Maximum Firing Rate (gal/hr)</u> | <u>Fuel Type, % sulfur</u> | <u>Install. Date</u> | <u>Stack #</u> |
|------------------|------------------------------------|-------------------------------------|----------------------------|----------------------|----------------|
| Boiler #1 | 4.2 | 30 | #2 oil, 0.5% K-1 Kerosene | 2004 | 1 |

Process Equipment

| <u>Equipment</u> | <u>Pollution Control Equipment</u> |
|------------------------------|------------------------------------|
| Shoe Manufacturing Equipment | none |

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

C. Application Classification

The application for New Balance does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Process Emissions

New Balance manufactured athletic shoes using a combination of automation and handmade processes at the Norway facility. New Balance no longer assembles shoe components, but rather receives components, which are then formed and fitted together to finish the shoe.

Two different types of technology are utilized, Solvent and Hot Melt. There are 20 to 30 Solvent or Hot Melt work stations based on demand.

In the Solvent technology process adhesive is applied to the upper and allowed to dry. The uppers are heated to activate the adhesive and aligned and pressed with the soles. Touch-up repairs are made as the last step.

In the Hot Melt technology process the soles are sprayed with a very fine mist of low VOC Hot Melt adhesive. The upper is heated in a steamer. No chemicals are utilized in this step. The sole is activated, aligned, and pressed with the upper. Touch-up repairs are made.

The majority of emissions from the facility are generated through the use of solvent based materials in the Solvent technology process. The use of solvent based cements necessitates the use of solvent based cleaners to remove cement residues.

C. Boiler #1

New Balance operates Boiler #1 for facility heating. The boiler is rated at 4.2 MMBtu/hr and fires #2 fuel oil. The boiler was installed in 2004 and exhausts through its own stack.

K-1 Kerosene is added to the #2 fuel oil during the winter months at approximately a 1 to 5 ratio to prevent gelling or waxing of the #2 fuel oil.

Due to its size, the boiler is not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

1. BACT/BPT Findings

The BACT/BPT emission limits for the boiler were based on the following:

- PM/PM₁₀ – 0.08 lb/MMBtu based on 06-096 CMR 103; 0.34 lb/hr
- SO₂ – based on firing ASTM D396 #2 fuel oil (0.5% sulfur); 0.5 lb/MMBtu; 2.12 lb/hr
- NO_x – 0.3 lb/MMBtu based on previous licenses; 1.26 lb/hr
- CO – 5 lb/1000 gal, AP-42, Table 1.3-1, dated 5/10; 0.15 lb/hr
- VOC – 0.2 lb/1000 gal, AP-42, Table 1.3-3, dated 5/10; 0.01 lb/hr
- Opacity – Visible emissions from the boiler shall not exceed 20% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period. [06-096 CMR 101]

New Balance shall be limited to 50,000 gallons/yr of K-1 Kerosene and #2 fuel oil combined on a 12 month-month rolling total basis.

Prior to January 1, 2016, the #2 fuel oil fired in Boiler #1 shall be ASTM D396 compliant #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning January 1, 2016, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm).

Periodic Monitoring

Periodic monitoring for the boiler shall include recordkeeping to document fuel use on both a monthly and a 12 month rolling total basis. Documentation shall include the type of fuel used and sulfur content of the fuel.

2. 40 CFR Part 63 Subpart JJJJJ

Boiler #1 may be subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The unit is considered an existing oil boiler, rated less than 10 MMBtu/hr.

For informational purposes, a summary of the current applicable federal 40 CFR Part 63 Subpart JJJJJ requirements is listed below. At this time, the Maine Department of Environmental Protection has not taken delegation of this area source rule promulgated by EPA, however New Balance is still subject to the requirements. Notification forms and additional rule information can be found on the following website: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. Compliance Dates, Notifications, and Work Practice Requirements

i. Initial Notification of Compliance

An Initial Notification submittal to EPA was due on September 17, 2011. [40 CFR Part 63.11225(a)(2)] .

ii. Boiler Tune-Up Program – Initial and Biennial

(a) A boiler tune-up program shall be implemented to include the tune-up of applicable boilers by March 21, 2012 according to the rule currently in place. [40 CFR Part 63.11196(a)(1)] However, a No Action Assurance letter was issued on March 13, 2012 stating that EPA will exercise its enforcement discretion to not pursue enforcement action for failure to complete the required tune-up by the stated compliance date. The rule is expected to have a future compliance date in either 2013 or 2014 once the final revisions are promulgated.

(b) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted;

- however, the burner must be inspected at least once every 36 months. [40 CFR Part 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
 3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. [40 CFR Part §63.11223(b)(3)]
 4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
 5. Measure the concentration in the effluent stream of CO in parts per million (ppm), by volume, and oxygen in volume percent, before and after adjustments are made. [40 CFR Part 63.11223(b)(5)]
 6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of start-up. [40 CFR Part §63.11223(b)(7)]
- (c) A Notification of Compliance Status shall be submitted to EPA no later than 120 days after the compliance date specified in 63.11196. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
- (d) The facility shall implement a biennial boiler tune-up program after the initial tune-up and initial compliance report has been submitted.
1. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up. [40 CFR Part 63.11223(a)]
 2. The biennial report shall be maintained onsite and submitted to EPA, if requested. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the type and amount of fuel used over the 12 months prior to the biennial tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The biennial compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]
- b. Recordkeeping
- Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; identification of each boiler, the date of tune-up,

procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

D. Process VOC and HAP Emissions

This facility emits VOC and hazardous air pollutants (HAPs) as identified in section 112(b) of the Clean Air Act. The majority of VOC and HAPs emissions from this facility are generated through the use of adhesives, solvent-based cements and cleaners during the shoe finishing process.

This facility has a VOC potential to emit (PTE) less than 40 tons/year and is therefore not subject to 06-096 CMR 134 *VOC RACT*. [06-096 CMR 134 (1)(A)(1)]

To document emissions of VOC and HAPs from the facility, New Balance will continue their recordkeeping program to document material usage, monthly inventory of materials purchased and in-house quantities, and the determination of VOC and HAPs emissions on a monthly basis.

The recordkeeping program consists of a solvent-based materials inventory to document the quantity of solvent at the facility. Material Safety Data Sheet (MSDS) data is used to quantify the VOC and HAPs content of each substance. All purchases of solvent-based materials are recorded. At the end of each month, an inventory report is generated. Total VOC and HAPs usage for each month is then determined from the net gain/loss of solvent in inventory plus the quantity of solvent purchased during the month. Documented off-site disposal of solvent-containing waste may be quantified and subtracted from the total solvent usage.

The implemented work practice standards and continued pursuit of low- or no-VOC releasing technologies and materials represents BPT for VOC emissions from New Balance. New Balance will practice good housekeeping procedures, such as keeping container lids closed and cleaning accidental spills immediately, to minimize VOC emissions. New Balance shall continue to seek process modifications which reduce VOC emissions.

Total facility VOC emissions from New Balance shall not exceed 10 tons per year (tpy) on a 12-month rolling total basis. Total emissions of HAP shall not exceed 9 tpy on a 12 month rolling total basis.

E. Annual Emissions

1. New Balance shall be restricted to the following annual emissions.
For the boiler, the tons per year limits were calculated based on 50,000 gallons/year of K-1 Kerosene and #2 fuel oil fired. The process emissions are based on a 12 month rolling total.

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

| | PM | PM ₁₀ | SO ₂ | NO _x | CO | VOC |
|-------------------|------------|------------------|-----------------|-----------------|------------|-------------|
| Boilers | 0.3 | 0.3 | 1.8 | 1.1 | 0.1 | 0.01 |
| Process Emissions | -- | -- | -- | -- | -- | 10.0 |
| Total TPY | 0.3 | 0.3 | 1.8 | 1.1 | 0.1 | 10.0 |

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011 through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. "Greenhouse gases" as defined in 06-096 CMR 100 (as amended) means the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gases (GHG) for purposes of licensing are calculated and reported as carbon dioxide equivalents (CO₂e).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, New Balance is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling is not required for a renewal if the total emissions of any pollutant released do not exceed the following and there are no extenuating circumstances:

| <u>Pollutant</u> | <u>Tons/Year</u> |
|------------------|------------------|
| PM | 25 |
| PM ₁₀ | 25 |
| SO ₂ | 50 |
| NO _x | 100 |
| CO | 250 |

Based on the total facility licensed emissions, New Balance is below the emissions level required for modeling.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-814-71-C-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if

construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
- B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
- C. submit a written report to the Department within thirty (30) days from date of test completion.
- [06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee

shall report all excess emissions in the units of the applicable emission limitation.
[06-096 CMR 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Boiler #1**

A. Fuel

1. Total fuel use for Boiler #1 shall not exceed 50,000 gal/yr of K-1 Kerosene and #2 fuel oil combined, based on a calendar year total basis.
2. Prior to January 1, 2016, the K-1 Kerosene and #2 fuel oil fired in the boiler shall be ASTM D396 compliant (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BPT]
3. Beginning January 1, 2016, the facility shall fire K-1 Kerosene and #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
4. Beginning January 1, 2018, the facility shall fire K-1 Kerosene and #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
5. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a calendar year total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|---------------|-----------|----------|----------------------|
| Boiler #1 | PM | 0.08 | 06-096 CMR 115, BPT |

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

| Emission Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|---------------|------------|--------------------------|-------------------------|-------------------------|------------|-------------|
| Boiler #1 | 0.34 | 0.34 | 2.12 | 1.26 | 0.15 | 0.01 |

- D. Visible emissions from Boiler #1 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 101]

(17) **Process Emissions**

- A. Total VOC emissions from the facility shall not exceed 10.0 ton/year on a 12 month rolling total basis. [06-096 CMR 115, BPT]
- B. New Balance shall record the amount of VOC emitted per unit of product produced on a monthly basis using the following procedures [06-096 CMR Chapter 115, BPT]:
1. The pounds of VOC emissions are calculated by recording the VOC content (i.e. lb/gal) of all material issued and by recording the amount (i.e. gallons) of VOC containing material issued at the facility. New Balance shall maintain records of the following:
 - a. Beginning of month facility storage inventory
 - b. Monthly facility purchases
 - c. End of month facility storage inventory

VOC emissions from New Balance shall be determined as follows, based on the information gathered from a through c above:

$$\text{Monthly VOC Emissions} = (a \times \text{VOC content}) + (b \times \text{VOC content}) \\ - (c \times \text{VOC content})$$

At New Balance's discretion, quantities of VOC shipped off-site with waste may be quantified and subtracted from the monthly VOC emissions.

- C. Total emissions of HAP (as listed in Section 112(b) of the Clean Air Act) shall not exceed 9.0 ton/year on a 12 month rolling total basis using the same procedure utilized for calculating VOC emissions in (17) B. [06-096 CMR Chapter 115, BPT]
- D. New Balance shall maintain standard operating and maintenance procedures (SOMP) to minimize VOC & HAP losses, and maintain these procedures at the appropriate locations within the facility. These procedures are as follows [06-096 CMR Chapter 115, BPT]:
1. A procedure to minimize the volatilization of solvents during the measuring of VOC containing material and/or mixing of VOC containing material.

2. A procedure to minimize VOC fugitive losses from the chemical and solvent storage rooms. Procedures should include methods of securely sealing containers and methods to clean up accidental spills.
 3. A procedure to minimize solvent usage or VOC losses during equipment cleanup and during transport (including the transferring of chemicals from the mixing areas to the production lines).
- (18) New Balance shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 23rd DAY OF April, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie R. Fox
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/20/2011

Date of application acceptance: 9/26/2011

Date filed with the Board of Environmental Protection:

This Order prepared by Lisa P. Higgins, Bureau of Air Quality.

